UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/631,916	07/31/2003	Jian Qin	KCC 4963 (K-C 19,109)	9626

321 7590 02/21/2007

SENNIGER POWERS
ONE METROPOLITAN SQUARE
16TH FLOOR
ST LOUIS, MO 63102

EXAMINER	
CHAPMAN, GINGER T	
ART UNIT	PAPER NUMBER
3761	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	02/21/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 02/21/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspatents@senniger.com

Office Action Summary	Application No.	Applicant(s)	
	10/631,916	QIN ET AL.	
	Examiner	Art Unit	
	Ginger T. Chapman	3761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) *1-12 and 26-39* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13-25 and 40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-40* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The affidavit filed on 9 October 2006 under 37 CFR 1.131 is sufficient to overcome the Azad reference.

Status of the claims

Claims 1-40 are pending in the application, claims 1-12 and 26-39 are withdrawn from consideration as being directed to a non-elected invention.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. § 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 13-17, 24-25 and 40 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 13-17, 24-25 and 40 are defined by a material having a gel stiffness index in the range of at least 0.8 to 0.85; a gel permeability under load of in the range of at least 200x10 (sup –9) cm^2 to at least 400x10(sup-9) cm^2; a centrifuge retention capacity in the range of at least 20 – 25 g/g; and a free swell gel bed permeability of at least about 2,000x10(sup-9) cm^2.

Claims merely setting forth physical characteristics desired in article, and not setting forth specific compositions which would meet such characteristics, are invalid as vague, indefinite, and functional since they cover any conceivable combination of ingredients either

presently existing or which might be discovered in future and which would impart desired characteristics; thus, expression "a liquefiable substance having a liquefaction temperature from about 40°C. to about 300°C. and being compatible with the ingredients in the powdered detergent composition" is too broad and indefinite since it purports to cover everything which will perform the desired functions regardless of its composition, and, in effect, recites compounds by what it is desired that they do rather than what they are; expression also is too broad since it appears to read upon materials that could not possibly be used to accomplish purposes intended. *Ex parte Slob* (Bd. Pat. App. & Int 1968) 157 USPQ 172; *Austenal Laboratories, Incorporated v. Nobilium Processing Company of Chicago et al.*, 115 USPQ 44 (D.C. N. Ill. 1957).

Claim Rejections - 35 USC § 102/103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 13-25 and 40 are rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Beihoffer et al (WO 99/25393).

With regard to claims 13 and 21, as seen in Figure 3A, Beihoffer et al disclose a surface treated absorbent material (30) comprising a superabsorbent material (32) comprising a cross-linked polymer (p. 12, ll. 20-26) comprising at least about 75 weight percent anionic polymer (p. 23, l. 12; p. 29, ll. 10-13; p. 33, l. 28-32), and a surface treatment (34) applied to the substantially the entire outer surface of the superabsorbent material, as recited in claims 21, said surface

treatment comprising a water soluble non-crosslinked polymer comprising about 50 weight percent cationic polymer (p. 10, ll. 2-7; p. 37, l. 9).

With regard to the limitations of a gel stiffness index of at least 0.8 as tested by test methods set forth by Applicant:

Where applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, the examiner may make a rejection under both 35 U.S.C. §§ 102 and 103, expressed as a 102/103 rejection. "There is nothing inconsistent in concurrent rejections for obviousness under 35 U.S.C. § 103 and for anticipation under 35 U.S.C. § 102." *In re Best*, 562 F.2d 1252, 1255 n.4, 195 USPQ 430, 433 n.4 (CCPA 1977). This same rationale should also apply to product, apparatus, and process claims claimed in terms of function, property or characteristic. Therefore, a 35 U.S.C. § 102/103 rejection is appropriate for these types of claims as well as for composition claims.

"[T]he discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer." *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999). Thus the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. *In re Best*, supra.

There is no requirement that a person of ordinary skill in the art would have recognized the inherent disclosure at the time of invention, but only that the subject matter is in fact inherent

in the prior art reference. *Schering Corp. v. Geneva Pharm. Inc.*, 339 F.3d 1373, 1377, 67 USPQ2d 1664, 1668 (Fed. Cir. 2003).

"[T]he PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his [or her] claimed product. Whether the rejection is based on inherency' under 35 U.S.C. § 102, on prima facie obviousness' under 35 U.S.C. § 103, jointly or alternatively, the burden of proof is the same...[footnote omitted]." The burden of proof is similar to that required with respect to product-by-process claims. *In re Fitzgerald*, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980) (quoting *In re Best*, supra). MPEP § 2112.

Beihoffer discloses the absorbent material is of the same type and formed in the same manner as the instant invention. The instant specification discloses at [0047-8] that it is the charges between cations and anions exposed at the surfaces of the particles following discharge of body fluids that inhibit inter-particle movement that provides the open voids between particles and thus the swelling constraint that results in the gel stiffness and gel permeability parameters of the material (see p. 23, ll. 1-4; p. 4, ll. 9-11 and p. 9, ll. 25-26). Therefore it is inherent in the material that it exhibits a stiffness index of at least 0.8.

In the alternative, Beihoffer, at p. 9, ll. 25-26 expresses the desire for a permeable surface treated absorbent material having particles spaced sufficiently apart such that they do not contact each other after absorbing discharged body fluids and swelling from the absorption, and thereby does not deform under the applied stress or pressure of being worn, i.e. stiffness. As seen in Figures 7-9, Beihoffer teaches such absorbent material. Therefore it would have been obvious to

one having ordinary skill in the art at the time the invention was made to form the absorbent material of Beihoffer having a stiffness index of at least 0.8 since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch and Slaney*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

In an alternative interpretation of the invention for anticipation under 35 USC § 102, in order for someone to actually determine whether or not a particular product meets the limitations of the instantly claimed invention requires subjecting such a product to the claimed test, making claim 13 a product-by-process claim.

Product-by-process claims are not limited to the manipulations of the steps, only the structure implied by the steps."[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). MPEP § 2113.

Regarding the alternative rejection of claim 13 under 35 USC § 103, generally, differences in test characteristics will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such test characteristic is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233; 235 (CCPA 1955).

A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

Regarding claim 13, the benefits of stiffness and permeability would have been known prior to applying a test, making these values result-effective variables. One of ordinary skill in the art would have recognized that maintaining open voids between the particles would result in a gel stiffness index. MPEP § 2144.04.

When the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). When the examiner shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not. *In re Spada*, 911, F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

The burden of proof has thus shifted to applicant to come forward with evidence establishing that the prior art products do not necessarily or inherently possess the characteristics of the claimed product. *In re Fitzgerald*, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980).

With regard to claims 14-17, 24-25 and 40, no structure is previously disclosed for the material, and therefore the absorbent material of Beihoffer fulfills the claimed limitations. With

regard to the limitations of gel stiffness, gel permeability, centrifuge retention capacity and a free swell gel bed permeability, Beihoffer discloses the absorbent material is of the same type and formed in the same manner as the instant absorbent material. The instant specification discloses at [0047-50] that the superabsorbent material is surface treated with a polymer having a charge opposite that of the superabsorbent material that provides the above noted parameters. Beihoffer discloses the structure and material of the claimed invention, and the ability of the material to provide the above noted parameters is inherent in the structure. Beihoffer discloses the claimed material and thus fulfills the claimed limitations either expressly or inherently.

In the alternative, Beihoffer discloses in c. 3, ll. 5-20, the ability of the polymer to have gel stiffness and permeabilities and retention, and thus discloses a desire for polymers exhibiting such properties. Therefore, even though Beihoffer is does not perform the same tests as Applicant and therefore does not claim results of those tests, the properties are inherent to the material. Therefore it would be obvious to one having ordinary skill in the art at the time the invention was made to use a surface treated absorbent material since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416.

With regard to claim 18, Beihoffer discloses the cationic polymer is polyvinyl amine (p. 10, l. 3).

With regard to claim 19, Beihoffer discloses the concentration of the cationic polymer is in the range of about 0.05 to about 5 weight percent of the superabsorbent material (p. 49, ll. 25-30).

With regard to claim 22, Beihoffer discloses the surface treatment comprises at least

about 70 weight percent cationic polymer (p. 34, l. 31).

With regard to claim 23, Beihoffer discloses the surface treatment further comprises in the range of about 0.5 to about 5 grams per weight of water per 1 gram weight of superabsorbent material (p. 44, ll. 5-11).

Claims 13-25 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nambu et al (US 5,883,158).

With regard to claims 13-25 and 40, Nambu et al disclose the invention substantially as claimed except for the surface treatment comprises in the range of about 0.5 to about 5 grams weight of water per 1 gram weight of superabsorbent material. Nambu et al teach at c. 5, ll. 24-30 that the amount of water is a parameter that effects whether the cross-linked structure is formed on the outer surface of the particle or is formed on the inside surface of the particle. Therefore the amount of water is a result effective variable in the known process of forming the structure of the absorbent material and it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the amount of water known in the prior art to form the treatment at the desired surface since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering optimum or workable ranges of a result effective variable involves only routine skill in the art. *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980).

Response to Arguments

Applicant's arguments with respect to claims 13-25 and 40 have been considered but are moot in view of the new grounds of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ginger T. Chapman whose telephone number is (571) 272-4934. The examiner can normally be reached on Monday through Friday 9:30 a.m. to 6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tatyana Zalukaeva can be reached on (571) 272-1115. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ginger Chapman
Examiner, Art Unit 3761
2/12/07

TATYANA ZALUKAEVA
SUPERVISORY PRIMARY EXAMINER